

only moderately the constriction about the upper third which characterizes the typical form. Sculpture consists of closely set sinuous incremental lines which appear slightly granose under a strong glass. Epidermis thin, corneous. Otherwise the description of the typical *H. virescens* applies. Altitude 21 mm. greatest diameter 14 mm.

Animal a mottled brown closely flecked with white, the markings of the body within showing through the shell. Eyes very dark blue. When fully extended the body length was 42 mm., the greatest width 22 mm., width of head 19 mm.

Type in my collection. Paratypes No. 161206 A. N. S. Phila. and in Dr. Fred Baker's collection.

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#### PTEROPODA FROM LOUISIANA

BY MARTIN D. BURKENROAD

During an exploration of Louisiana coastal waters, from 1929 to 1931, nine species of euthecosomatous pteropods and one undetermined larval gymnosome were taken. The local and seasonal distribution of these forms was as follows:

None were taken in the brackish estuarine area inside the shoreline proper of the Gulf. *Creseis conica* (Eschscholtz) alone appeared sporadically in the shallow, variably brackish to fairly salt inner littoral waters extending fifteen or twenty miles offshore from the Gulf beach. These records are based on year-round tows. The remaining forms were taken on the two occasions when a penetration of the outer, more oceanic littoral area was feasible, in August, 1930, and in May, 1931. The limited material available from the former occasion contains several specimens of *Creseis acicula* (Rang) and *Cavolinia longirostris* (Lesueur). The series of tows from the latter contains all the species listed, with the exception of *Creseis acicula*. Both collections are from the same area: thirty-five to forty miles off Grand Isle and about thirty miles W.S.W. of the Southwest Pass of the Mississippi River, in the westward flowing

countercurrent to the east-flowing Gulf Stream which becomes perceptible further south and east. The gently sloping sea-bottom is here at a depth of a few hundred feet.

The pteropod fauna of the Gulf of Mexico has been the subject of little record except in the region of the Florida Keys. Three of the Louisiana pteropods *Creseis acicula*, *C. conica*, and *Hyalocylis striata* (Rang) are not listed from the Gulf by Meisenheimer, 1911, in his discussion of distribution.

## SPIRATELLIDAE

*Spiratella trochiformis* (d'Orbigny).

*S. bulimoides* (d'Orbigny).

## CAVOLINIIDAE

*Creseis virgula virgula* (Rang).

*C. v. conica* (Eschscholtz).

*C. acicula acicula* (Rang).

*Hyalocylis striata* (Rang).

*Cavolinia longirostris* (Lesueur).

*C. uncinata* (Rang).

*C. inflexa inflexa* (Lesueur).

The nomenclature of Tesch, 1913, and Thiele, 1931, has been followed.

A note on certain of the species may be added:

"*Limacina lesueuri* variety" of Vayssiere, 1915, seems close to or identical with *Spiratella trochiformis* as here determined. The identification by Bonnevie, 1913, of *S. trochiformis* with *S. retroversa* (Fleming), from the latter of which she distinguishes *S. balea* (Moller) seems not to resolve the confusion involving this group of forms. The *S. retroversa* group of snails as defined by Tesch have the columella arched to right rather than to left as in *S. trochiformis*, an operculum of quite different outline, and a tentacular lobe on the fin which is absent in *S. trochiformis*. These differences are not discussed by Bonnevie in her definition of *S. retroversa*.

The material here determined as *S. bulimoides* possesses very fine, closely spaced spiral lines of punctures on the

shell, while Tesch and Vayssiere describe the species as unsculptured. In other characters the Louisiana specimens are identical with the descriptions, and distinct, especially in operculum, umbilicus, and absence of tentacular lobes on the fin, from the *S. retroversa* group with which they might be confused. The species was much less abundant than *S. trochiformis*.

A single specimen of the form variably considered as a distinct species or as the typical variety of *C. virgula* was taken together with numerous *C. conica*, none of which latter showed any variation in the direction of *C. virgula*.

A number of young stages of a *Cavolinia* were taken which appear attributable only to *C. uncinata*, the larvae of which have not been previously reported.

The material examined has been deposited in the collections of the American Museum of Natural History and of the United States National Museum, to the authorities of which institutions the writer wishes to express his thanks for the facilities made available.

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1. *Melongena corona inspinata* Richards.      2. *Gyrineum perca edgerlyi* Richards.  
 3. *Gyraultus vermicularis albolineatus* J. Henderson.  
 4. *Lymnaea mazamae* J. L. & R. I. Baily.      5, 6. *Ligus fasciatus solisoccasus* DeBoe.